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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,041	01/22/2004	Graham Hawkes	770.02	6991
8685	7590	06/27/2005	EXAMINER	
DERGOSITS & NOAH LLP FOUR EMBARCADERO CENTER, SUITE 1450 SAN FRANCISCO, CA 94111			OLSON, LARS A	
			ART UNIT	PAPER NUMBER
			3617	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/763,041

Applicant(s)

HAWKES, GRAHAM

Examiner

Lars A. Olson

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. An amendment was received from the applicant on April 7, 2005.
2. A notice of withdrawal from issue was mailed on June 20, 2005.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6-9, 14-17 and 38-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Doolittle (US 2,720,367).

Doolittle discloses the same submersible as claimed, as shown in Figures 1 and 2, that is comprised of a hull, defined as Part #10, having at least one pressure pod, defined as Part #12, for accommodating at least one person in a recumbent sitting position, as shown in Figure 1, at least one pair of fixed wings that are disposed on said hull, as shown in Figure 2, at least one elevator, defined as Part #27, disposed on said hull, a thruster, defined as Part #19, and a steering means, as shown in Figure 1, where said wings have ailerons, as shown in Figure 2 and described in lines 46-52 of column 1, that are movable in opposite directions with respect to each other to provide said submersible with the ability to roll. Said submersible also has positive buoyancy. Said at least one pair of fixed wings is also structured to generate a balancing

downward force in response to forward movement of said submersible in order to counteract the positive buoyancy of said submersible, as shown in Figure 6.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle.

Doolittle, as set forth above, discloses all of the features claimed except for the use of a pressure pod made from sand cast aluminum.

The use of a pressure pod made from a specific material would be considered by one of ordinary skill in the art to be a design choice based upon the required strength and physical characteristics of said pressure pod.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a pressure pod made from sand cast aluminum in combination with the submersible as disclosed by Doolittle for the purpose of providing a submersible with a pressure pod that is both strong and lightweight.

7. Claims 21 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Rowe (US 5,237,952).

Doolittle, as set forth above, discloses all of the features claimed except for the use of an emergency airbag.

Rowe discloses a submersible, as shown in Figures 1-6, that is comprised of a hull, defined as Part H, having at least one pressure pod, defined as Part F, for accommodating at least one person, defined as Part #12, in a recumbent sitting position, as shown in Figure 5, at least one pair of wings, defined as Part #20, that are disposed on said hull, at least one elevator, defined as Part #20 or 22, that is disposed on said hull, a thruster, defined as Part #48, a steering means, defined as Part #36, and at least one emergency airbag, as described in line 48 of column 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize an emergency airbag in combination with a submersible, as taught by Rowe, in combination with the submersible as disclosed by Doolittle for the purpose of providing a submersible with an additional flotation means for use during emergency situations requiring added buoyancy.

8. Claims 4, 5, 12, 13, 18-20, 24-32, 36, 37, 43-46, 50, 51, 57-60, 64-72, 76-84, 88 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Schubert (US 3,598,074).

Doolittle, as set forth above, discloses all of the features claimed except for the use of a submersible with a pressure pod that is separate from and contained within a hull of a submersible, two pressure pods for accommodating at least two persons, three pressure pods for accommodating at least three persons, a dome access hatch for said

pressure pod, a life support system for said pressure pod, and at least one buoyancy tank for providing variable buoyancy to said submersible.

Schubert discloses a submersible, as shown in Figures 1-3, that is comprised of a hull, defined as Part #10, that contains four separate pressure pods, defined as Part #18, that each accommodate at least one person, as shown in Figure 2, and have a dome access hatch, defined as Part #50, as well as a life support system, defined as Part #52. At least one buoyancy tank, defined as Part #70 or 72, is also provided on said submersible in order to provide variable buoyancy to said submersible.

The use of a pressure pod made from a specific material would be considered by one of ordinary skill in the art to be a design choice based upon the required strength and physical characteristics of said pressure pod.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a submersible with a pressure pod that is separate from and contained within a hull of a submersible, two pressure pods for accommodating at least two persons, three pressure pods for accommodating at least three persons, a dome access hatch for said pressure pod, a life support system for said pressure pod, and at least one buoyancy tank for providing variable buoyancy to said submersible, as taught by Schubert, in combination with the submersible as disclosed by Doolittle for the purpose of providing a submersible with improved life support and emergency rescue capabilities for its operators, as well as improved handling and control during operation.

9. Claims 33, 47, 73 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Schubert, and further in view of Rowe.

Doolittle in combination with the teachings of Schubert shows all of the features claimed except for the use of an emergency airbag.

Rowe, as previously cited, discloses a submersible that is comprised of a hull, defined as Part H, having at least one pressure pod, defined as Part F, for accommodating at least one person, defined as Part #12, in a recumbent sitting position, as shown in Figure 5, at least one pair of wings, defined as Part #20, that are disposed on said hull, at least one elevator, defined as Part #20 or 22, that is disposed on said hull, a thruster, defined as Part #48, a steering means, defined as Part #36, and at least one emergency airbag, as described in line 48 of column 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize an emergency airbag in combination with a submersible, as taught by Rowe, in combination with the submersible as disclosed by Doolittle and the teachings of Schubert for the purpose of providing a submersible with an additional flotation means for use during emergency situations requiring added buoyancy.

10. Claims 10, 11, 22, 23, 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Kohnen (US 5,704,309).

Doolittle, as set forth above, discloses all of the features claimed except for the use of a submersible with at least one pressure pod that accommodates at least two or three persons.

Kohnen discloses a submersible, as shown in Figures 1-12, that is comprised of a hull, defined as Part #10, with a pressure pod, defined as Part #50, that is capable of accommodating at least three persons, as shown in Figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a submersible with at least one pressure pod that accommodates at least two or three persons, as taught by Kohnen, in combination with the submersible as disclosed by Doolittle for the purpose of providing a submersible with a pressure pod that is capable of accommodating more than one person.

11. Claims 34, 35, 48, 49, 74, 75, 86 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle in view of Schubert, and further in view of Kohnen.

Doolittle in combination with the teachings of Schubert shows all of the features claimed except for the use of a submersible with at least one pressure pod that accommodates at least two or three persons.

Kohnen, as cited above, discloses a submersible that is comprised of a hull, defined as Part #10, with a pressure pod, defined as Part #50, that is capable of accommodating at least three persons, as shown in Figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a submersible with at least one pressure pod that accommodates at least two or three persons, as taught by Kohnen, in combination with the submersible as disclosed by Doolittle and the teachings of Schubert for the purpose of providing a submersible with a pressure pod that is capable of accommodating more than one person.

Response to Arguments

12. Applicant's arguments with respect to claims 1-89 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reder (US 3,183,871) discloses a boat with underwater wings having ailerons. Frise (US 1,785,620) discloses a control surface with an aileron for submersibles.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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15. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (703) 308-9807.

lo

June 22, 2005

LARS A. OLSON
PRIMARY EXAMINER

Lars Olson
6/22/05